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### Preventing development of allergic disorders in children

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## 10-minute consultation

# Preventing development of allergic disorders in children

Chantelle Anandan, Aziz Sheikh

A 33 year old woman is planning to have a baby and asks you for advice. She wants to know what she can do to reduce the risk of her baby developing allergies.

### What issues you should cover

**Defining allergy**—What does she mean by allergic problems? Are there any conditions that particularly concern her? Understanding of allergy differs widely between professionals and the public, so it may help to clarify her ideas and concerns.

**Risk of the baby developing allergic conditions**—Babies born into households where one or more first degree relative (mother, father, or siblings) manifest atopic allergic conditions—the most common are eczema, allergic rhinitis, asthma, and food allergy—are at a much higher risk. If one parent is affected the risk is about 50%, increasing to 75% if both parents manifest atopic allergic disease.

**Nutrition**—How is she planning to feed the baby? The World Health Organization recommends that breast feeding is the optimal source and method of infant nutrition.

### What you should do

#### Before conception

- Explain that there is no evidence that preconceptional dietary change will reduce the risk of a future baby developing allergic conditions, irrespective of the risk in the family.

#### During pregnancy

- Tell her that inappropriate dietary restrictions can endanger the growth and wellbeing of the developing baby. Such diets may adversely affect maternal or fetal nutrition, resulting in poor gestational weight gain and fetal growth and a preterm birth.
- Recommend that she supplement her diet with fish oil (or omega 3 polyunsaturated fatty acids) from 20 weeks' gestation until delivery. Omega 3 supplementation may help reduce the risk in babies at high risk of allergic conditions.
- Tell her that weak evidence exists that the use of paracetamol and antibiotics during pregnancy may be associated with a higher risk of asthma and hay fever in offspring. She should try to avoid these. However, infrequent use of paracetamol in early pregnancy is unlikely to cause problems.

#### While she is pregnant or lactating and after birth

- Tell her that high exposure of the baby to tobacco smoke is associated with a higher risk of wheezing in infancy and childhood asthma.
- Explain that, although evidence is lacking, some authorities advise avoiding peanuts during pregnancy and lactation to help reduce the risk of peanut allergy in offspring born into high risk families.

### Useful reading

Arshad SH. Primary prevention of asthma and allergy. *J Allergy Clin Immunol* 2005;116:3-14

Friedman NJ, Zeiger RS. The role of breast-feeding in the development of allergies and asthma. *J Allergy Clin Immunol* 2005;115:1238-48

Kramer MS, Kakuma R. Maternal dietary antigen avoidance during pregnancy and/or lactation for preventing or treating atopic disease in the child. *Cochrane Database Syst Rev* 2003;(4):CD000133 (doi: 10.1002/14651858.CD000133)

Clough J. *Allergies at your fingertips*. London: Class, 2000 (for patients)

- Recommend that she take probiotic dietary supplements during the last four weeks of pregnancy and during lactation. Some trial evidence indicates that probiotics reduce the risk in infants with a high risk of developing allergic disorders.

Avoiding feeding with cow's milk may reduce the baby's risk of developing atopic eczema. She should breast feed exclusively during the baby's first 4-6 months of life. If she is unable to breast feed, recommend a fully or partially hydrolysed milk formula—these formulas reduce the risk of allergic conditions developing during the first five years of life. Partially hydrolysed preparations generally smell better and are more palatable than fully hydrolysed preparations. Explain that soya based formulas do not reduce the risk.

- Recommend that she wean the infant from the age of 6 months. High risk infants should not be exposed to peanuts and peanut based products until at least 3 years old.
- Explain that evidence is currently insufficient to recommend avoiding aero-allergens (from house dust mite, dogs, and cats) as a prevention strategy. Birth cohort studies indicate that exposure to pets during pregnancy and early life may be protective.
- Reassure her that routine immunisations do not increase the risk of babies developing allergic disorders and are safe to give to babies with food allergies, eczema, or asthma.

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